

THE CLAIMS

Having thus described my invention, what I claim as new, useful and non-obvious and, accordingly, secure by Letters Patent of the United States is:

1. A metallic stud frame construction panel, definable in terms of an x, y, z coordinate system, said panel comprising:
 - (a) a plurality of vertically disposed z-axis studs, each stud comprising a z-axis elongate substantially rectangular integral steel web within a yz plane of each stud, each stud further comprising (i) a first series of xz plane tabs depending from a first z-axis edge of said web in a x-axis direction, said tabs interdigitating with void spaces therebetween, and (ii) a second series of xz plane tabs projecting from an opposite z-axis edge of said web in a like x-axis direction, each of said second series of tabs staggered relative to said first series of tabs; and
 - (b) inner and outer xz plane concrete slabs cast *in situ* about said first and second series of tabs respectively, said slabs integrally molded about x- and y- axis peripheries of said panel to thereby form a horizontal beam, a capstan and load bearing, z-axis vertical columns.

2. The panel as recited in Claim 1, further comprising:
 - a layer of insulating material provided between opposing interior surfaces of said respective outer and inner slabs and within a space therein between said first and second series of tabs of each metallic stud.
3. The panel as recited in Claim 2, in which one or more of tabs of said two series of tabs include a z-axis elongate L-shaped element integrally dependent from a z-axis line of said tabs opposite to a line of dependency thereof from said web, said L-shaped element including an elongate integral yz plane sub-element elongate in a z-axis direction.
4. The panel as recited in Claim 3, in which said insulating material comprises a thermal insulator.
5. The panel as recited in Claim 3, in which said insulating material comprises an audio insulator.
6. The panel as recited in Claim 3, in which said studs comprise 10-25 gauge steel.
7. The panel as recited in Claim 6, in which said slabs comprise lightweight concrete.

8. The panel as recited in Claim 3, in which at least one end of each stud defines a key-like fit complementally between opposing inner surfaces of said concrete slab.